

Question 1

British women who might one day want to have a baby are advised to consume no more than two portions a week of a particular food because of certain pollutants. What food is it?

The answer was B – Oily Fish

The UK Food Standards Agency has been trying to balance the health benefits of the oils in certain fish with the potentially cancer-causing dioxins which can accumulate in their tissues. Exposure to these in certain concentrations over a long period of time may damage human health.

Question 2

Which of the following chemicals are NOT contained in an ordinary computer and monitor?

The answer was E - dioxins

A computer monitor contains about 1.5kg of lead, while other parts of the computer contain small amounts of mercury and arsenic. All three are toxic metals and make safe disposal of the world's millions of obsolete computers a concern. Brominated flame retardants are used in the plastics on some computers and have been shown to disrupt hormones in animals. Dioxins are not present in computers - but again, disposal is a concern as these toxic chemicals can be released when plastic is burnt.

Question 3

The use of chlorine to bleach paper has been criticised as being highly polluting - but what environmental drawback does "totally chlorine-free" paper have?

The answer was C - It can't be made using recycled paper
Much paper which has been recycled will have been made with chlorine in the first place, so for paper to be "totally chlorine free" it cannot be made using recycled paper. The main concern is the dioxins which are produced when chlorine is used to produce paper, not the chlorine in the paper itself, so some argue that paper made without chlorine, but using recycled paper, is a better option overall.

Question 4

A third of male fish in British rivers are thought to be in the process of changing sex. What do experts blame?

The answer was B - Hormones in sewage - including those from the female contraceptive pill

A third of male fish in British rivers are in the process of changing sex due to pollution in human sewage, research by the UK's Environment Agency suggests. A survey of 1,500 fish at 50 river sites found more than a third of males displayed female characteristics.

Question 7

Leaded petrol is one of the world's major sources of urban air pollution. Although phased out in most developed countries, it remains widespread in developing countries. What does lead poisoning cause?

The answer was D - All of the above

Lead poisoning is also one of the most common environmental child health problems in the United States. Lead is found in many developed countries in paint dating from before the 1970s, in soil and air from industrial and other emissions, and in water from lead pipes which have not yet been replaced.

Question 8

A pesticide once widely used on US lawns and gardens is currently being phased out - to which type of chemical weapon is it chemically similar?

The answer was B - Nerve agents such as sarin

In 2000, Diazinon was the pesticide most widely used on lawns by US homeowners, but the Environment Protection Agency is now phasing it out. It is an organophosphate - a group of chemicals developed in 1930s Germany which includes some compounds used as nerve agents and some used as insecticides. Organophosphate pesticides are commonly used in many parts of the world, although they are known to affect the human nervous system. Some countries are now trying to reduce their use and even ban them.

Question 5

Gold jewellery remains popular - but which of these harmful chemicals is NOT a pollutant commonly associated with mining the precious metal?

The answer was B - Benzene

Cyanide is used in the extraction process and often stored in large dams or tailing ponds. Mercury is used by small-scale miners to help extract gold and is often then discharged into streams and rivers. Both metals are toxic to humans. Sulphuric acid is formed when sulphide-heavy rocks containing the gold are exposed to air and water - the acid then dissolves heavy metals and becomes an environmentally damaging solution.

Question 6

Many detergents and laundry powders contain phosphates - why are environmentalists trying to get these phased out?

The answer was B - They can over-stimulate plant growth
Phosphates are added to detergents to soften water. Like nitrates, they stimulate plant growth and are used in fertilisers. If not removed from waste water they can cause massive plant growth which chokes out water wildlife - and can contribute to oxygen-starved areas known as dead zones.